



**MONAD UNIVERSITY HAPUR (UP)
(SCHOOL OF AGRICULTURE & APPLIED SCIENCES)
DEPARTMENT OF BIOTECHNOLOGY**

Course: B. Tech. Biotechnology

Subject Name: Analytical Techniques

Sub. Code:

Semester: III

Assignment No: 1

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q. 1.

- (a) What does the henderson-hasselbalch equation explained?
- (b) Describe principle and application of centrifugation.

Q. 2.

- (a) What is sedimentation coefficient?
- (b) Describe ultracentrifugation principle and application.



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Course: B. Tech. Biotechnology

Subject Name: Analytical Techniques

Sub. Code:

Semester: III

Assignment No: 2

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
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Q. 1.

- (a) Describe principle and application of light microscope.
- (b) Describe the principle of autoradiography.

Q. 2.

- (a) Describe the principle methods and application of electron microscope.
- (b) Describe GM counter.



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DEPARTMENT OF BIOTECHNOLOGY

Course: B. Tech. Biotechnology
Subject Name: Biochemistry
Semester: III
Sub. Code:
Assignment No: 1

Due date of submission: 10.11.2016

Instruction

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Q.1.

- (a) What are possible non covalent bonds?
- (b) Describe monosaccharide structure.

Q.2.

- (a) Describe the structure and functions of homopolysaccharides.
- (b) Describe structure and function of lipids.



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DEPARTMENT OF BIOTECHNOLOGY

Course: B. Tech. Biotechnology

Subject Name: Biochemistry

Semester: III

Sub. Code:

Assignment No: 2

Due date of submission: 10.11.2016

Instruction

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Q.1.

- (a) What are structure and functional role of essential amino acids?
- (b) Describe the classification of enzymes with examples.

Q.2.

- (a) What is the structure and function of alpha helix protein?
- (b) What are allosteric enzymes and their function?



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Course: B. Tech. Biotechnology

Subject Name: Enzymology

Semester: III

Sub. Code:

Assignment No: 1

Due date of submission: 10.11.2016

Instruction

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Q.1.

- (a) What is procedure for extraction of enzyme from plant?
- (b) How to enzymes reduce activation energy explain with example?

Q.2.

- (a) Explain the Michaelis menten equation
- (b) What is the competitive inhibitor of an enzyme explain with example?



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Course: B. Tech. Biotechnology

Subject Name: Enzymology

Semester: III

Sub. Code:

Assignment No: 2

Due date of submission: 10.11.2016

Instruction

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Q.1.

- (a) What are the advantages of enzyme immobilization?
- (b) What are application and advantage of membrane reactors?

Q. 2.

- (a) What are application enzyme biosensors?
- (b) Explain the classes of enzymes.